

# WEST Search History

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DATE: Sunday, January 25, 2004

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		<i>DB=USPT,PGPB; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L13	L12 and L7	2
<input type="checkbox"/>	L12	L11 and lysr3	2
<input type="checkbox"/>	L11	L10 and (1 amino acid)	36
<input type="checkbox"/>	L10	L9 and (corynebacteria or corynebacteria glutamicum)	50
<input type="checkbox"/>	L9	LysR	109
<input type="checkbox"/>	L8	LysR3	3
<input type="checkbox"/>	L7	L6 or L5 or L4 or L3 or L2 or L1	36064
<input type="checkbox"/>	L6	(((536/23.1)!.CCLS.))	9936
<input type="checkbox"/>	L5	(((530/350)!.CCLS.))	13143
<input type="checkbox"/>	L4	(((435/320.1)!.CCLS.))	22185
<input type="checkbox"/>	L3	(((435/252.32)!.CCLS.))	133
<input type="checkbox"/>	L2	(((435/252.3)!.CCLS.))	7801
<input type="checkbox"/>	L1	((435/106)!.CCLS.)	442

END OF SEARCH HISTORY

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(FILE 'HOME' ENTERED AT 14:14:04 ON 25 JAN 2004)

FILE 'HCAPLUS' ENTERED AT 14:16:04 ON 25 JAN 2004

1 445 SEA ABB=ON PLU=ON LYSR  
2 0 SEA ABB=ON PLU=ON L1 (L) (CORYNEBACTERIA OR CORYNEBACTERIA  
GLUTAMICUM OR (BACTERIA (L) CORYNEFORM))  
3 25945 SEA ABB=ON PLU=ON LYS  
4 12 SEA ABB=ON PLU=ON L3 (L) (CORYNEBACTERIA OR CORYNEBACTERIA  
GLUTAMICUM OR (BACTERIA (L) CORYNEFORM))  
5 9 SEA ABB=ON PLU=ON L4 AND PD<20000810

> d ibib ab 1-9

5 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:244874 HCAPLUS  
DOCUMENT NUMBER: 132:292773  
TITLE: Novel feed process for fermentative production of  
L-lysine with corynebacteria  
AUTHOR(S): Anon.  
CORPORATE SOURCE: UK  
SOURCE: Research Disclosure (2000), 431(March),  
P427-P429 (No. 43110)  
CODEN: RSDSBB; ISSN: 0374-4353  
PUBLISHER: Kenneth Mason Publications Ltd.  
DOCUMENT TYPE: Journal; Patent  
LANGUAGE: German  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RD 431010		20000310		
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PRIORITY APPLN. INFO.: RD 2000-431010 20000310

B The fermentative prodn. of L-**Lys** by **corynebacteria** was improved by combining a repeated batch technique with the limitation of the C source (fed batch). Using *Corynebacterium glutamicum* DM58-1, concns. of 53-56 g **Lys**-HCl/L, yields of 0.21-0.23 g **Lys**-HCl/g sucrose, and a productivity of 1.7-2.0 g **Lys**-HCl/L/h were found in each cycle of 3 repeated cycles. Using another strain of **corynebacteria** and 5 cycles, concns. of 98-122 g **Lys**-HCl/L, yields of 0.38-0.47 g **Lys**-HCl/g glucose, and a productivity of 2.2-2.9 g **Lys**-HCl/L/h were measured. The mean time of 1 cycle was decreased from 51.7 to 43.8 h. With a high-output strain and 4 cycles, concns. of 130-150 g **Lys**-HCl/L, yields of 0.51-0.55 g **Lys**-HCl/g glucose, and a productivity of 3.1-3.4 g **Lys**-HCl/L/h were reached. The cycle time was decreased from 54 to 42 h.

5 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:585447 HCAPLUS  
DOCUMENT NUMBER: 129:226624  
TITLE: Cloning of gene dtsR2 associated with surfactant resistance from *Corynebacterium glutamicum* (*Brevibacterium lactofermentum*) and use for amino acid production  
INVENTOR(S): Kimura, Eiichiro; Yakoshi, Tomotsu; Oosumi, Takeshi; Nakamatsu, Wataru  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 10234371	A2	19980908	JP 1997-41146	19970225 <--
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PRIORITY APPLN. INFO.: JP 1997-41146 19970225  
B Gene dtsR2 is isolated from *Corynebacterium glutamicum* strain ATCC13869. It enables the mutant C. glutamicum strain AJ11060 to grow in a medium contg. higher concn. of surfactants, which are used to suppress biotin during the prodn. of amino acids such as **Lys** and Glu. The gene can be used for the prepn. of high amino acid producer **coryneform bacteria** strains.

5 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:31386 HCAPLUS  
DOCUMENT NUMBER: 128:71608  
TITLE: Methods for producing target substances by fermentation using a microorganism containing a

temperature-regulatable extra-chromosomal gene  
INVENTOR(S): Kuwabara, Yoko; Kimura, Eiichiro; Kawahara, Yoshio;  
Nakamatsu, Tsuyoshi  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan; Kuwabara, Yoko; Kimura,  
Eiichiro; Kawahara, Yoshio; Nakamatsu, Tsuyoshi  
SOURCE: PCT Int. Appl., 77 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9748790	A1	19971224	WO 1997-JP1886	19970604 <--
W: HU, PL, SK, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
JP 10000087	A2	19980106	JP 1996-155575	19960617 <--
EP 974647	A1	20000126	EP 1997-924309	19970604 <--
R: CH, DE, DK, ES, FR, GB, IT, LI, NL				
PRIORITY APPLN. INFO.:		JP 1996-155575	19960617	
		WO 1997-JP1886	19970604	

B Disclosed is method for efficiently producing a target substance such as an amino acid by ferment. using **coryneform bacteria** contg. a temp.-regulatable extra-chromosomal gene. Activation of the gene stimulates the microbial growth, whereas impairs the prodn. of the target substance due to competitive biosynthetic pathway. In order to improve the prodn. of L-Glu or L-Lys, gene dtsR (detergent resistance conferring gene), .alpha.-KGDH (.alpha.-ketoglutarate dehydrogenase), or HD (homoserine dehydrogenase) is exclusively inserted into a plasmid contg. a temp.-sensitive origin of replication and transformed into a host **coryneform bacteria** that exhibit, preferably, the recA-phenotype. The **bacteria** (e.g. Brevibacterium lactofermentum) are cultured at a permissive temp. for normal growth without the needs of adding amino acids, penicillin, surfactants, etc.; and at non-permissive temp. to eliminate the plasmids and thus, the yield of L-Glu or L-Lys. The method presents no risks of interfering chromosomal structure while reduces the cost for producing target substances.

5 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:645144 HCAPLUS  
DOCUMENT NUMBER: 123:192374  
TITLE: Cloning of gene for phosphoenolpyruvate carboxylase variants of Escherichia that are free of feedback inhibition by aspartic acid  
INVENTOR(S): Sugimoto, Masakazu; Suzuki, Tomoko; Matsui, Hiroshi; Izui, Katsura  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
SOURCE: PCT Int. Appl., 75 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9506114	A1	19950302	WO 1994-JP1365	19940817 <--
W: AU, BR, CA, CN, CZ, HU, KR, PL, RU, SK, US, VN				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2169170	AA	19950302	CA 1994-2169170	19940817 <--
AU 9480991	A1	19950321	AU 1994-80991	19940817 <--
AU 682547	B2	19971009		
EP 723011	A1	19960724	EP 1994-924384	19940817 <--
EP 723011	B1	20020703		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
HU 73690	A2	19960930	HU 1996-240	19940817 <--
HU 219600	B	20010528		
CN 1133615	A	19961016	CN 1994-193905	19940817 <--

BR 9407625	A	19970121	BR 1994-7625	19940817 <--
RU 2133772	C1	19990727	RU 1996-107112	19940817 <--
PL 181380	B1	20010731	PL 1994-313119	19940817
CZ 289051	B6	20011017	CZ 1996-524	19940817
AT 220099	E	20020715	AT 1994-924384	19940817
SK 283369	B6	20030603	SK 1996-204	19940817
JP 07111890	A2	19950502	JP 1994-196777	19940822 <--
JP 3013711	B2	20000228		
JP 08070860	A2	19960319	JP 1994-196778	19940822 <--
US 5876983	A	19990302	US 1996-596366	19960429 <--
US 5919694	A	19990706	US 1997-967104	19971110 <--

# PRIORITY APPLN. INFO.:

JP 1993-209775	A	19930824
JP 1993-209776	A	19930824
JP 1994-153876	A	19940705
WO 1994-JP1365	W	19940817

B The genes encoding phosphoenolpyruvate carboxylase variants that are not substantially inhibited by aspartic acid are isolated and used for the prodn. of the enzyme variant in *Escherichia coli* or a **coryneform** bacterium. One of the variants has 625-Glu replaced with **Lys**. Transgenic *Escherichia coli* or **coryneform** bacteria expressing the variants can be used for the prodn. of amino acids such as **Lys**, Thr, Met, etc. The gene for aspartokinase .alpha. and .beta. units of *Corynebacterium glutamicum* is also isolated.

5 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:493710 HCAPLUS  
 DOCUMENT NUMBER: 119:93710  
 TITLE: Manufacture of L-lysine with glutamic acid-producing coryneform bacteria  
 INVENTOR(S): Nakano, Tetsuo; Azuma, Tomoki; Kurato, Yoshuki  
 PATENT ASSIGNEE(S): Kyowa Hakko Kogyo Kk, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 3 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05111386	A2	19930507	JP 1991-272461	19911021 <--
JP 3006939	B2	20000207		
US 5302521	A	19940412	US 1992-962273	19921016 <--
HU 65358	A2	19940502	HU 1992-3299	19921020 <--
HU 215248	B	19981130		

PRIORITY APPLN. INFO.: JP 1991-272461 A 19911021

B L-**Lys** is manufd. by culturing iodothyronine-resistant and L-**Lys**-producing glutamic acid-producing **coryneform** bacteria. *Corynebacterium glutamicum* H-8241 (FERM BP-3594), an iodothyronine-resistant strain obtained by mutation of *C. glutamicum* H-4934 (FERM BP-1655), was shake-cultured in a medium contg. sucrose, peptone, yeast ext., biotin, thiamine-HCl, urea, and salts at 32.degree. and pH 7.2 for 24 h and shake-cultured in a medium contg. sucrose, yeast ext., biotin, urea, and salts at 32.degree. and pH 7.2 for 72 h to manuf. 48 mg L-**Lys**-HCl/mL, vs. 44 mg/mL, for its parent strain *C. glutamicum* H-4934.

5 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:587920 HCAPLUS  
 DOCUMENT NUMBER: 117:187920  
 TITLE: Chemotaxonomic differentiation of coryneform bacteria isolated from biofilters  
 AUTHOR(S): Bendinger, Bernd; Kroppenstedt, Reiner M.; Klatte, Stefan; Altendorf, Karlheinz  
 CORPORATE SOURCE: Abt. Mikrobiol., Univ. Osnabrueck, Osnabrueck, D-4500, Germany  
 SOURCE: International Journal of Systematic Bacteriology (1992), 42(3), 474-86  
 CODEN: IJSBA8; ISSN: 0020-7713

DOCUMENT TYPE: Journal  
LANGUAGE: English

3 **Coryneform bacteria** that were isolated from biofilters which are used for waste gas treatment of animal-rendering plant emissions were differentiated and partially identified by using chemotaxonomic methods. On the basis of the results of a numerical anal. of whole-cell fatty acid profiles, 79 isolates were divided into 2 major groups; the members of the 1st group contained satd. and monounsatd. fatty acids, whereas the members of the 2nd group were characterized by iso- and anteiso-branched fatty acids. Division into subclusters was based mainly on quant. differences in fatty acid compn. and was confirmed by the results obtained for addnl. chem. markers (e.g., respiratory quinones, mycolic acids, polar lipids, cell wall amino acids, and whole-cell sugar patterns). By combining the results obtained for chemotaxonomic analyses that were performed for strains contg. satd. and monounsatd. fatty acids, the genus *Corynebacterium* (2 *Corynebacterium* spp. were differentiated on the basis of the occurrence of tuberculostearic acid), the genus *Gordona*, and the genus *Mycobacterium* were identified. Among the strains that produced iso-anteiso fatty acid patterns, 1 subgroup was affiliated with the nicotianae group of the genus *Arthrobacter*; however, some strains contained a new combination of chem. markers. Peptidoglycan type A4.alpha., L-**Lys**-Gly-L-Glu was combined with menaquinones MK-7 and MK-8, whereas peptidoglycan type A4.alpha., L-**Lys**-L-Glu occurred together with MK-8 and MK-9. The 2nd subgroup was characterized by a new type B peptidoglycan and MK-11, as well as small amts. of MK-12. Differentiation that was based 1st on chemotaxonomy and 2nd on physiol. gave reliable results. Thus, **coryneform** strains with new characteristics were isolated from biofilters.

5 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1992:400119 HCAPLUS  
DOCUMENT NUMBER: 117:119  
TITLE: Inducer of cytokines in vivo: overview of field and romurtide experience  
AUTHOR(S): Azuma, Ichiro  
CORPORATE SOURCE: Inst. Immunol. Sci., Hokkaido Univ., Sapporo, 060, Japan  
SOURCE: International Journal of Immunopharmacology (1992), 14(3), 487-96  
CODEN: IJIMDS; ISSN: 0192-0561  
DOCUMENT TYPE: Journal; General Review  
LANGUAGE: English

3 A review with 48 refs. Cell-wall skeletons of bacteria such as mycobacteria, nocardia, **corynebacteria**, propionibacteria and listeria, have potent adjuvant activity on immune responses. It was reported that N-acetylmuramyl-L-alanyl-D-isoglutamine (MDP) was the min. structural requirement of adjuvant activity of the bacterial cell-wall skeleton and a variety of MDP derivs. and related compds. were synthesized. Among the synthetic MDP derivs., MDP-**Lys** (L18) (romurtide) was selected as the immunostimulant, by using exptl. models for non-specific host resistance against *Escherichia coli* in mice. Romurtide was shown to have host-stimulating activity against bacterial, fungal and viral infections, cytokine-producing activity and the capacity to increase the no. of leukocytes and platelets in exptl. models. It was also shown that the clin. effectiveness of romurtide depends on the restoration of the no. of leukocytes and platelets of cancer patients treated with chemotherapy or radiation therapy. The mechanism of action of romurtide is discussed.

5 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1973:68487 HCAPLUS  
DOCUMENT NUMBER: 78:68487  
TITLE: Amino acid sequence of the threonine-containing mureins of coryneform bacteria  
AUTHOR(S): Fiedler, Franz; Schleifer, Karlheinz; Kandler, Otto  
CORPORATE SOURCE: Bot. Inst., Univ. Munich, Munich, Fed. Rep. Ger.  
SOURCE: Journal of Bacteriology (1973), 113(1), 8-17  
CODEN: JOBAA; ISSN: 0021-9193  
DOCUMENT TYPE: Journal

LANGUAGE:

English

In a study of the mureins of **coryneform bacteria** (Arthrobacter, Brevibacterium, Cellulomonas, Corynebacterium, Erysipelothrix) 21 threonine-containing strains were found. In several of the strains the amino acid and amino sugar composition of the murein was muramic acid (Mur), glucosamine (GlcNH<sub>2</sub>), D-Glu, L-**Lys**, L-Thr, and Ala in a molar ratio of 1:1:1:1:1:4 or 5, and in several other strains it was Mur, GlcNH<sub>2</sub>, D-Glu, L-Thr, L-**Lys**, Ala, and L-Ser in a molar ratio of 1:1:1:1:1:3:1. The amino acid sequence of the mureins was detd. by analyzing the oligopeptides derived from partial acid hydrolyzates. There were 5 different murein types. The peptide subunits attached to the muramic acid are the same, namely L-Ala-D-GluNH<sub>2</sub>-L-**Lys**-D-Ala. In one strain, the .alpha.-carboxyl group of D-Glu is substituted by D-alanine amide. The interpeptide bridges of the different types consist of the peptides L-Ala-L-Thr-L-Ala, L-Ala-L-Thr, L-Ala-L-Ala-L-Thr, L-Ala-L-Ala-L-Ala-L-Thr, or L-Ala-L-Thr-L-Ser which are bound through their C-termini (L-Ala, L-Thr, L-Ser) to the .epsilon.-amino group of L-**Lys** of one peptide subunit and by their N-termini (L-Ala) to the C-terminal D-Ala of an adjacent peptide subunit. Detn. of the N- and C-terminal groups in the mureins showed that .apprx. 15 to 30% of the interpeptide bridges are not cross-linked.

ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

SESSION NUMBER:

1970:463355 HCAPLUS

UMENT NUMBER:

73:63355

LE:

Murein types of the genus Microbacterium

OR(S):

Schleifer, Karl H.

ORPORATE SOURCE:

Bot. Inst., Univ. Muenchen, Munich, Fed. Rep. Ger.

RCE:

Archiv fuer Mikrobiologie (1970), 71(3),

271-82

CODEN: ARMKA7; ISSN: 0003-9276

UMENT TYPE:

Journal

LANGUAGE:

German

The quant. amino acid compn. of the murein of *M. flavum*, *M. thermosphactum*, *M. lacticum*, and *M. liquefaciens* was detd. The murein of *M. flavum* and *M. thermosphactum* contains diaminopimelic acid (I) alanine, and glutamic acid at molar ratio of .apprx.1:1:1,5-1.7. In addn. 1.8 moles ammonia was found per mole glutamic acid, indicating, that both I and glutamic acid are present as amides. Murein of *M. lacticum* showed the following molar ratios: threo-3-hydroxyglutamic acid (Hyg) + Glu:Gly:L-**Lys**:D-Ala = 1:2:2:1. *M. liquefaciens* showed Hyg + Glu:Gly:Hsr:D-Orn:D-Ala = 1:2:1:1:1, where Hsr is homoserine. The amino acid sequence of the murein of *M. liquefaciens* was detd. by analyzing the various peptides from partial acid hydrolyzates of the cell walls. The murein of *M. liquefaciens* resembles the murein of *M. lacticum*. The tetrapeptide bound to the muramic acid has the sequence: Gly-Hyg(Glu)-Hsr-D-Ala. The cross-linkage is performed in the same way as in *M. lacticum*. The interpeptide bridge N.delta.-Gly-D-Orn is bound by its glycine end to the .alpha.-carboxyl groups of Hyg(Glu) and by the .alpha.-amino group of D-Orn to D-Ala of an adjacent peptide subunit. The primary structure of the murein of *M. flavum* and *M. thermosphactum* is similar to that of the murein of *Corynebacterium diphtheriae* as has been shown by the quant. amino acid compn. and the fingerprints of the partial hydrolyzates of the cell walls. *M. flavum* and *M. thermosphactum* can be distinguished from *M. lacticum* and *M. liquefaciens* not only by murein type but also in morph. and certain physiol. characteristics. They are closely related to the human and animal pathogenic **corynebacteria** and should be removed from the genus *Microbacterium*. *M. lacticum* and *M. liquefaciens*, on the other hand, differ significantly from human and animal pathogenic **corynebacteria** and show greatest similarity to certain plant pathogenic **corynebacteria**.